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DISCOVERY

Effective risk management and the profitability of insurance firms in Nigeria

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ABSTRACT

The paper examine effective risk management and the profitability of insurance firms listed on Nigeria stock exchange from 2008-2018. The study used capital structure, firm size and working capital as the independent variables while the dependent variable used is return on equity (ROE). STATA 13 was used to analyzed the data obtained from the annual report of the twenty six insurance companies used for this study. The result revealed that capital structure and working capital significantly affect the profitability of insurance firms listed on Nigeria stock exchange. It also revealed that firm size does not affect the profitability of insurance companies in Nigeria. The study recommends that insurance companies should try as much as possible to increase their capital structure as well as working capital so that they can boost their profit. Insurance companies should not bother so much with increasing their size since it does not affect their profitability. They should rather look for modern means of marketing to increase their market share and hence, profit instead of firm size.

1. BACKGROUND TO THE STUDY

Organizations are face with different risks on a daily basis, these risks could be as a result of natural disasters, government policies, or wrong policies by the management of the organizations. Apart from the pains and sufferings inflicted by the aforementioned

risks, it also comes with financial injuries. Organizations therefore, need to identify those risks that can threaten their existence; the best way to do this is via the instrumentality of insurance. Insurance help individuals and corporate bodies(insured) to mitigate the risks they are expose to by transferring those risks to an insurance company(insurer) through a payment known as premium (Alawattegama 2018; Nasir, 2018; Olalekan 2018).

Insurance companies are organizations that help individuals and corporate bodies to manage the various risks confronting them. Ondigi (2016) and Tomar, Sainy and Gupta (2019) opine that risk management (RM) is a model for managing risks confronting businesses, which could require some strategic approaches. Risks management therefore, is the identification and arrangement of components put together within an organization to efficiently and effectively manage risk over time thereby enabling the organization to survive any unforeseen occurrence that may threaten their profitability.

Effective risks management in the insurance industry is a key component for the survival and growth of the economy of any nation; this is accomplished via the ability of the insurance companies to identify those factors that can hinder their profitability. The profitability of the insurance companies is sometimes view in terms of their contribution to their host country gross domestic product (GDP). The contribution of the insurance sector of Nigeria to the GDP of the country is not commensurate with what is obtainable in other part of the world. For instance, In the United Kingdom, the insurance industry contributes about 20% of the total GDP of the country. The contribution of the insurance industry to the total GDP of African countries like Kenya and South Africa is 3.4% and 17% respectively. Despite the claimed growth of the Nigerian insurance industry from just one agency (Royal Exchange Assurance) in 1918 to the present fifty six (56) insurance companies as asserted by NAICOM (National Insurance Commission), the insurance industry in Nigeria contribute a meagre 0.7% to the total GDP of Nigeria (Ufomadu, 2017). This therefore, shows that the insurance industry in Nigeria is performing (making profit) below the insurance industries in African countries and beyond. This is because the environment in which the Nigerian insurance industry operate is full of risks (Owolabi, Oloyede, & Akinola, 2017; Sisay, 2017; Chipa & Wamiori, 2017) and it seem like the managers or regulator(s) of the industry are yet to effectively manage those risks that are making the industry to perform below expectation.

This study titled "Effective risk management and the profitability of insurance industry in Nigeria" identified capital structure, firm size and working capital as some of the risks that are confronting the Nigerian insurance industry using return on equity (ROE) as the proxy. The objectives of the study are: To examine the extent to which capital structure affect the ROE of insurance firms in Nigeria. To determine the extent to which firm size affect the ROE of insurance firms in Nigeria. To study the effect of working capital on the ROE of insurance firms in Nigeria, the research hypothesis is stated in null form, it is as follows:

H_{o1}: Capital structure does not affect the ROE of insurance firms in Nigeria.
H_{o2}: Firm size does not affect the ROE of insurance firms in Nigeria.
H_{o3}: Working capital does not affect the ROE of insurance firms in Nigeria.

1.1. Conceptual and theoretical reviews

Various concepts on profitability were reviewed for the purpose of this study. The reviewed concepts are as follows:

1.2. Capital Structure and profitability

Capital structure refers to the proportions or combinations of equity share capital, preference share capital, debentures, retained earnings, long-term loans, as well as other sources of long-term funds that constitute the total amount of the capital a firm should raise in order to run its business successfully. It is an important financial variable that affects the profitability of insurance companies. Capital structure is measure as the ratio of asset to debt. Arulyel and Ajanthan (2014) and Nimalathasan and Brabete (2010) are some of the scholars that used capital structure to measure the profitability of firms. This study therefore, used capital structure to measure the profitability of insurance firms in Nigeria. This is because scholars are of the opinion that the higher the capital structures of a firm, the better the profit. Examples of scholars with such opinion include; Pal (2014) and Handoo and Sharma (2014).

1.3. Working capital and profitability

It has been established from related literatures that working capital is another important financial variable that influences the profitability of insurance companies. Working capital is the amount set aside by organizations for meeting the day to day affairs of the organizations. It is measured as ratio of cash to asset. It is the quantum of fund required to maintain day-to-day expenditure on operational activities of a business enterprise (Paul & Mitra 2018). Yogendrarajah and Thanabalasingam (2011) opine that optimal level of working capital maximizes the profitability of firms. The amount set aside as working capital can affect the profit of the organization positively or negatively. Scholars like Mitra (2018), Kaur and Singh (2013), Bagchi and Khamrui among others have used

working capital to measure the profitability of firms at various points in time. This is due to its importance in determining the profitability of organizations.

1.4. Firm size and financial performance

Firm size is empirically measured as natural logarithm of total asset of a company. Firm size generally connote how large or small the firm is. Size of a firm is very important because it could determine the volume of sales, profit and market shares. Mwangi and Iraya, (2014) assert that large firms have the ability to spread fixed cost and hence enjoy economies of scale. Scholars like Ajao and Ogrierikhi (2018), Alomari and Azzam (2017), Berhe and Kaur (2017), Ullah Faisal and Zuhra (2016) and Kaya (2015) established a positive relationship between firm size and the profitability of firms. Kazeem (2015) observed that this positive relationship is due to the fact that larger insurance companies usually have greater capacity or strength for dealing with adverse market fluctuations than small companies.

1.5. Theoretical Framework: Institutional Theory

The underpinning theory for this study is the institutional theory. The theory posits that institutions are a critical component in the environment. Scott (1995) identified institutions as normative, regulative and cognitive structures and activities that provide stability and meaning for social behavior. These institutions include customs, laws, social and professional norms, regulations, culture and ethics. Institutions exert a constraining influence over organizations, called isomorphism that forces organizations in the same population to resemble other organizations that face the same set of environmental conditions (Miles, 2012). This study chose institutional theory as it underpinning theory because of it emphasis on professional commitment scale (Suddaby, Gendron, & Lam, 2009) and subsidiary performance measure (Slangen, & Hennart, 2008).

Professional commitment scale is the commitment of the various professionals (Actuaries, underwriters, risk assessors or risks managers, accountant, insurance brokers among others) to harness their skills together in order to identify and effectively manage risks thereby ensure the profitability of their organizations. They do that by identifying variables that can affect the profitability of the organization. These variables include capital structure, firm size, working capital return on equity (ROE) and others. These variables are the basis on which performance is measured.

1.6. Empirical reviews

This section focuses on the reviewed of related studies on risks management and profitability of firms both in developed and developing countries. Emphasis is placed on some of the risks management variables used in this study as they relate to profitability. The research work conducted by Ajao and Ogieriakhi (2018) studied firm specific factors and performance of ***i***nsurance firms in Nigeria from 2009-2017. The study used 12 insurance companies as the sample size for this study Using E-view 8, the study revealed a direct and significant relationship between insurance performance and firm's age. Firm size and growth rate have significant inverse relationship with insurance firm's performance.

Paul and Mitra (2018) studied analysis of the effect of working capital management on profitability of firms: Evidence from Indian steel industry from 2000–2016. The variables used as indicators of working capital are quick ratio, debtors' turnover ratio and finished goods turnover ratio. Return on asset (ROA) is the dependent variable. The study revealed that working capital significantly affects the profitability of firms in India.

Alomari and Azzam (2017) examined the effect of firm's micro and macroeconomic factors on performance of Jordanian insurance companies from 2008-2014.measured by return on assets (ROA) which is considered as proxy of profitability. Using return on assets (ROA) as the dependent variable, the study revealed that liquidity, leverage and under writing risks have negative and significant effect on the performance of Jordanian insurance companies. It also discovered that size of the company, market share; inflation and GDP have positive and significant effect on the profitability of the Jordanian insurance industry.

Berhe and Kaur (2017) studied the key factors that affect the profitability of insurance companies in Ethiopia. The researchers used internal and external variables to study the profitability of insurance companies in Ethiopia. The internal variables used are; company size, capital adequacy, leverage ratio, liquidity ratio, and loss ratio while the external variables are; market share, growth rate of GDP and inflation rate from 2005-2015. Seventeen (17) insurance companies were used for the study. The regression result revealed that company size, capital adequacy, liquidity ratio and growth rate of GDP were the major factors that significantly affect the profitability of insurance companies in Ethiopia. It also revealed that leverage ratio, loss ratio, market share and inflation rate have insignificant effect on insurance companies profitability in Ethiopia.

Ullah, Faisal, and Zuhra, (2016) studied the Factors Determining Profitability of the Insurance Industry of Bangladesh. Using underwriting risk, expense ratio, solvency margin, premium growth, asset growth, and company size as the independent variables,

return on asset (ROA) as the dependent variable**,** data were obtained from eight (8) insurance companies from 2004-2014. Using an Ordinary least squares (OLS) regression model, the paper found significant inverse relationship between underwriting risk, and size, with profitability (ROA). The study revealed a significant and positive relationship between growth, expense ratio and solvency margin with profitability (ROA).

Kazeem (2015) studied Firm specific characteristics and financial performance of listed insurance firms in Nigeria from 2006-2013. Using STATA 10 for data analysis, the result shows that firm size, loss ratio, liquidity, and leverage are the most important determinants of financial performance. In addition, liquidity ratio is positively and significantly related with financial performance. The study also revealed that age of insurance firms and premium growth are insignificantly related to the financial performance of insurance firms listed on Nigeria Stock Exchange (NSE).

In a related study, Kaya (2015) studied the effect of firm-specific factors on the profitability of Non-Life insurance companies in Turkey from 2006-2013. The researcher collected data from 24 non-life insurance companies operating in Turkey. STATA 12 was used to analyzed the data obtained for the study. The study revealed that firm size, loss ratio, firm age, current ratio and premium growth are the firm specific factors that affect the profitability of non-life insurance companies in Turkey. It also revealed that leverage, retention and motor insurance insignificantly affect the profitability of non-life insurance companies in Turkey.

Handoo and Sharma (2014) in their study identified the important determinants of capital structure of 870 listed Indian firms' from2001-2010. The study used ten independent variables and three dependent variables to test the regression analysis. The study revealed that profitability, firm size, cost of debt, growth, debt serving capacity, tax rate and tangibility significantly affect the leverage structure of firms in India. Therefore, the study discovered that the aforementioned variables are the determinant of capital structure in Indian firms.

Pal (2014) studied the determinants of capital structure choice of Indian steel companies. The study collected data from the thirty seven (37) insurance firms listed on India National Stock Market. Correlation and regression analysis were used to explore the relationship between the independent variables (tangibility, firm size, non-debt tax shield, business risk and profitability) with the dependent variable (leverage). The study revealed that tangibility, non-debt tax shield, size and growth opportunity have significant effect on the leverage of the capital structure of the companies unlike profitability and business risks.

Mwangi and Iraya (2014) examined the determinants of financial performance of general insurance underwriters in Kenya from 2010-2012. Using multiple linear regression, The results were that financial performance was positively related to earning assets and investment yield. It also revealed that expense ratio and loss ratio are negatively related to the financial performance of firms in Kenya. The remaining variables (growth of premiums, size of underwriter and retention ratio) were not significantly related to financial performance.

Arulvel and Ajanthan (2013) this study investigates the relationship of capital structure and financial performance of trading companies which are listed in CSE (Colombo Stock Exchange) from 2007 to 2011. The study concludes that capital structure is negatively related to financial performance of Colombo Stock Exchange.

The study of kaur and Singh (2013) on managing efficiency and profitability through working capital revealed that efficiency and profitability can be managed through working capital. The researchers empirically analyzed data from 200 BSE companies.

Bagchi and Khamrui (2012) examined the relationship between working capital management and profitability: A study of selected FMCG companies in India. They discovered in the study that there is a strong and negative relationship between working capital management and the profitability of firms.

Yogendrarajah and Thanabalasingam (2011) examined working capital management and its impact on financial performance: an analysis of trading firms' from 2004-2009. The dependent variable Return on Assets is used as a measure of profitability of financial performance and its' relationship with working capital management was investigated to find out the results. The researchers used Package for Social Sciences (SPSS) to analyzed the data of nine (9) trading firms. The study revealed that some firms have efficient working capital management while others don't have efficient working capital.

Another study on capital structure is the study of Nimalathasan and Brabete (2010). The researchers studied capital structure and its impact onthe profitability of listed manufacturing firms in Sri Lanka. Their findings revealed a strong positive relationship between profitability ratio (net profit ratio, gross profit and operating profit) and debt equity ratio listed manufacturing firms in Sri Lanka. Therefore, the study conclude that capital structure affect the profitability of listed manufacturing firms in Sri Lanka.

Lazaridis and Tryfonidis (2006) studied the relationship between working capital management and corporate profitability of listed company in the Athens Stock Exchange from 2001-2004. The study used sample of 131 listed companies to examine the relationships between working capital and the profitability of the listed firms. The study discovered that there is a significance relationship between working capital management and profitability of listed companies in the Athens Stock Exchange within the period of the study.

Adams and Buckle (2003) examined the determinants of the operational performance of the Bermudian insurance market, from 1993–1997. Panel data model was applied to forty seven (47) insurance companies, the findings revealed that insurance firms with low liquidity, reinsurance and high leverage, have better operational performance than those insurance companies that do not possess such attributes. In underwriting risk, the results indicate a positive relationship between this type of risk and insurers' operational performance. It also shows that company size and scope of activities are not factors with explanatory power.

1.7. Literature Gap

Looking at the above reviewed literatures, you will notice that the literatures reviewed on capital structure and working capitals are mostly from 2014 downward. Moreover, none of the literatures reviewed on the two variables were conducted in Nigeria. This suggest that there is a need to still used those same variables to conducted a study on their effect on the profitability of insurance companies in to see whether the result obtained by those scholars is still applicable in this decade as well as in Nigeria. A close look at the literatures reviewed on firm size revealed an interesting variation in the outcome of the studies.

Virtually all the most recent empirical literatures reviewed in this study revealed a positive relationship between firm size and profitability of firms; this is quite different from the studies of scholars like Adams and Buckle (2003) and Mwangi andIraya (2014). These scholars found no significant relationship between firm size and profitability of insurance companies. The variation in the findings of Adams and Buckle (2003) with that of other scholars probably might be due to changes in time and globalization. It could also be due to the approaches the various scholars took in conducted their researches. This study will use the same variable to study it effect on the profitability of insurance firms in the Nigerian.. This might help to explain the basis of the variations.

2. METHODOLOGY OF THE STUDY

The design for the study is the panel research design. The panel design is selected because the study has to do with collection of data from across large population and at different time. The panel design is suitable for the study because insurance companies in Nigeria have similar characteristics. The panel data was used not only to describe the relationship between the independent variables (capital structure, firm size and working capital) and the dependent variables (return on equity) but to investigate the influence of the set of independent variables on the dependent variable(ROE). Both simple and multiple regressions were employed to analyze the data collected. For the purpose of our analysis, ordinary least simple regression was used to test each hypothesis of the study. A statistical/econometrics package STATA 13 was used to analyze the data.The researcher used twenty six (26) insurance companies quoted on Nigeria stock exchange (as at the time of conducting this research). The research is for eleven years period (2008-2018).

2.1. Model Specification

The model adopted for this study is that of Ullah, Faisal, and Zuhra, (2016). The model was adopted because of its ability to describe a given system and the strategy used to address issues in an industry. Little modification was made to the model. The modification is in the variable used for the study. The researcher used underwriting risk, expense ratio, solvency margin and premium as the independent variables while the dependent variable is return on asset (ROA). This study used capital structure, firm size and working capital as the independent variables with return on equity (ROE) is the proxy. *The model is stated as follows:*

$$\mathbf{ROEit} = \boldsymbol{\beta 0it} + \boldsymbol{\beta 1CAPTSit} + \boldsymbol{\beta 2FSIZEit} + \boldsymbol{\beta 3CTARit} + \boldsymbol{\varepsilon it}$$

Where, Return on Asset (ROE) are measure as firm profitability, β0 = constant, β1… β3 = the slope which represents the degree in which profitability changes as the independent variable change by one unit variable. CAPTS = Capital structure, FSIZE = Firm size, CTAR= Working capital, ε = error term, t = measure of time, i =number of insurance firm observations. Where:

ROE = Return on capital

CAPTS = Asset to debt ratio

FSIZE = Log of total asset
CTAR = Cash to asset ratio

3. PRESENTATION OF ANALYSED DATA

3.1. Introduction

This section focuses on data analysis; it is immediately followed by the presentation of result, analysis and interpretation of data collected subject to model testing. Furthermore, findings are discussed and policy implications from the findings are drawn for the purpose of forming opinion. The target population comprises of twenty six (26) listed insurance companies in Nigeria between 2008 – 2018.

3.2. Descriptive Statistics

Table 1.1

	Mean	Std. D	Min	Max	Skewness	Kurtosis
ROE	-3.0382	51.077	-461.9	126.63	-5.0509	38.3636
CAPTS	52.1339	48.154	0.03	444.12	4.6908	32.2354
FSIZE	7.04796	0.8053	0.01	8.35	-7.066	62.5901
CTAR	16.6132	15.057	0.01	108.58	1.4705	7.2762

Source: Researcher Computation, 2020.

Table 1.1 presents the summary of the descriptive statistics for the parameters used specifically return on equity (dependent variable), capital structure, firm size and working capital (independent variable).As can be inferred from the outcome of the result, ROE had an average of -3.03 ranging between minimum of -461.9 to a maximum of 126.63 with associated dispersion value of 51.07 which implies that ROE across the industry is significantly dispersed. The skewness and kurtosis value of -5.05 and 38.36 shows that the data is normally distributed. The descriptive statistics on capital structure shows the mean value of 52.13 with standard deviation of 48.15. The result further shows that capital structure has a minimum value of 0.03 and maximum value of 444.12, the result revealed a skewness of 4.69 value and kurtosis value of 32.23. It can therefore be said that the data is normally distributed across the residuals.

On the other hand, the result shows the firm size of the listed insurance company. The table presents a mean value of 7.0479. Firm size has a minimum value of 0.01 and maximum value of 8.35. The level of dispersion to both side stood at 0.805 while the skewness of -7.0479 and kurtosis of 62.590shows that the data is normally distributed. Working capital shows an average value of 16.613. the minimum and maximum value is 0.01 and 108.58 respectively. The standard deviation stood at 15.057 which implies that working capital of the listed insurance companies is significantly dispersed. The skewness of 1.470 and kurtosis of 7.276 shows that the data is normally distributed.

3.3. Correlation Analysis

Correlation analysis is used to test the problem of multi-collinearity which may arise among independent variables. Specifically, this problem occurs when two or more independent variables are highly correlated with each other, which may distort the results of regression. In other words, high correlation between independent variables could bring about unreliable findings. Table 1.2 exhibits the correlation matrix explaining how the independent variables under the study are correlated with each other.

Table 1.2

Correlation Test

	ROE	CAPTS	FSIZE	CTAR	VIF
ROE	1				1.02
CAPTS	-0.166	1			1.02
FSIZE	0.0404	0.055	1		1.01
CTAR	0.1831	-0.080	0.104	1	

Source: Researcher Computation, 2020.

As being illustrated in the table, all the statistics are below 0.8, which is a critical level for considering the multi-collinearity problem (Hair et al., 2010). Therefore, in this analysis, there is no multi-collinearity among the variables. As can be seen, there is a positive correlation between ROE and Firm size and working capital with coefficient value of 0.04 and 0.18 respectively. A negative relationship exists between ROE and capital structure (-0.16). Relationship between capital structure and firm size was found to be positive (0.05), while the relationship between capital structure and working capital is negative (-0.08). Finally firm size has a positive relationship with working capital (0.10).

Also, the study tested for multi-collinearity using Variance Inflation Factor (VIF), the result shows absence of multi-collinearity among the study independent variables given the value of VIF for capital structure, firm size and working capital to be 1.02, 1.02 and 1.01 respectively, which is less than 9.6 as suggested by Gujarati (2004). So absence of multi-collinearity in the study model implies that the coefficient of independent variables can be rely on to predict the degree of influence on dependent variable.

3.4. Regression Analysis

OLX, fixed effect and random effect regression model was analyzed. In order to choose the appropriate model that suit the study, panel data diagnostic tests were carried out. Table 1.3 shows the analysis for OLX, fixed and random effect.

Table 1.3

OLX, Fixed and Random Model

	OLX			Fixed Effect			Random Effect		
	Coeff	**Std Err**	**P-value**	**Coeff**	**Std Err**	**P-value**	**Coeff**	**Std Err**	**P-value**
CAPTS	-.1642	.06231	0.009	-.1792	.0644	0.006	-.1642	.06231	0.008
FSIZE	2.006	3.7338	0.591	1.360	3.816	0.722	2.006	3.7338	0.591
CTAR	.5675	.20004	0.005	.5728	.2158	0.008	.5675	.20004	0.005
R-Square			0.057			0.057			0.057

The table presents OLX, fixed and random effect model. Capital structure has a significant effect on performance with P Value less than 1% across the three models. Working capital was also significant on performance with P value less than 1%. Firm size was found to be insignificant on performance with P value greater than 5% significant level.

3.5. Panel Data Diagnostic Tests

Table 1.4

Hausman Test

Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Probability**
ROCE	2.36	3	0.5002

Source: Researcher Computation, 2020.

Table 1.4 shows that the test statistics have a chi statistic of 2.36 with three degrees of freedom and a corresponding p value of 0.50. Since the probability is not significant, thus random effect model is preferred over fixed effect model.

The study further carried out Breusch and Pagan Lagrangian multiplier test for Random effect to choose between the Random and OLS result.

Table 1.5

Breusch –Pagan LM Test

Dependent variable	**· 2-value**	**p-value**
ROCE	0.00	1.000

Source: Researcher Computation, 2020.

Results in Table 1.5 show the LM test statistic is 0.00 and P value 1.00 is greater than the critical value at one per cent level of significance respectively. Thus the OLX specification is preferred over random effect text.

3.6. Interpretation of OLX Model

Having check for all the residuals required for linear regression, the study proceeds to interpret the result of OLX Effect as presented in table 1.6.

Table 1.6

OLX Effect

OLX Effect				
	Coef.	**Std. Err**	**T Stat.**	**P Value**
CAPTS	-.1642	0 .06231	-2.64	0.00

FSIZE	2.006	3.7338	0.54	0.59
CTAR	.5675	0.20004	2.84	0.00
R-square 0.057 **F(3,276)** 5.68 **Prob F** 0.00				

Source: Researcher Computation, 2020.

The regression result is presented in the table 1.6 above. The result shows R^2 of 0.057 or 5.7%. This implies that the study independent variables (capital structure, firm size and working capital) account for 5.7% variation in the dependent variable (return on capital), while the remaining 94.3% can be explained by other variables that are not included in the model. The result from table 1.6 above shows that F-statistics (5.68) is significant at 5% level. This implies that the study model is fit. Capital structure and working capital was found to be significant on performance with p value less than 1%. The result also shows that firm size is insignificant to financial performance at 5% p-value.

4. DISCUSSION

The coefficient of capital structure of firms is -0.1642 shows a negative and significant effect on profitability of listed insurance companies in Nigeria given the p-value of 0.00 which is less than 1% level of significance. Thus, insurance companies are said to have a bad combination of debt and equity to finance its overall operation and growth. This finding implies that a unit percent rise in capital structure will bring about -16.42% decrease in the firm profitability over the observe years. Therefore, the study accepts the alternate hypothesis that states that capital structure has a significant effect on profitability of listed insurance company in Nigeria. This finding is in conformity with the work of Nimalathasan and Brabete (2010) and not in conformity with the work of Arulyel and Ajanthan (2014).

The firm size has a positive and insignificant effect on performance of listed insurance companies in Nigeria. It was discover that the size of the firm does not determine or is not a yardstick to measure the profitability of insurance companies in Nigeria. The findings reveals that a unit percent rise in the level of firm size will bring about 20% rise in profitability of insurance companies. Insurance companies are therefore advised to put more effort in considering other variables that will affect their profitability. The finding of this study is consistent with the findings ofMwangi and Iraya (2018) and Adams and Backle (2003). This study therefore, does not support the views of Ajao and Ogrieriakhi (2018), Alomari and Azzam (2017), Berhe and Kaur (2017), Ullah, Faisal and Zuhira (2016), Kazeem (2015), Kaya (2012). The deviation of this finding from most findings could be due to the changes globalization is bringing. These changes could be seen in the aspect of online businesses which hardly have branches or assets all over yet they are making profit. Examples include Facebook and Whatsapp, these firms don't have assets or branches all over the world yet they are making profit in billions of dollars daily. This suggests that the introduction of internet is reducing the influencing of firm size on the profitability of organizations like insurance firms.

Lastly, working capital has positive and significant effect on the profitability of insurance companies in Nigeria. This indicate that the higher the working capital the higher the profitability of insurance companies in Nigeria. A unit percent increase in working capital will lead to 56.75% increase in profitability of insurance firms in Nigeria. It is therefore advised that much capital should be available for the day to day operation of the business. The result of the study is in support with the study of Paul and Mitra (2018) and bagchi and Khamrui (2012) and didn't support the study of Lazaridis and Tryfonidis (2006).

5. CONCLUSION AND RECOMMENDATION

The topic of this research is "effective risk management and profitability of insurance firms in Nigeria from 2008-2018". The primary objective of the paper is to examine the effect of independent variables (capital structure, firm size and working capital) on the dependent variable (ROE). Data for the study was obtained from the annual reports of the twenty six (26) insurance companies used for the study. SATA 13 is the statistical package used to analyze the data. The result revealed that only capital structure and working capital have effect the profitability of insurance companies listed on Nigeria stock exchange. Firm size was found to have insignificant effect on the profitability of insurance firms listed on Nigeria stock exchange. The study recommends that insurance companies should try as much as possible to increase their capital structure as well as working capital so that they can boost their profit. Insurance companies should not bother so much with increasing their size via having physical structures all over because it does not affect their profitability. They should rather look for modern means of marketing to increase their market share and hence, profit instead of depending on size.

Suggestion for further studies

This study was conducted for the whole insurance industry. Subsequent studies can be conducted for the various segment in the industry (using the same variables), this will reveal whether the result is applicable to every segments in the industry or not. Other risk variables can be used to conduct the same study apart from the ones used for this study (capital structure, firm size, working capital and return on equity). This will reveal the effect of other variables on the profitability of insurance firms in Nigeria.

Conflicts of interest

None

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